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13 August 1958

MEMORANDUM FOR: Director of Central Intelligence

SUBJECT : Identification of Special Projects

REFERENCE : Memorandum for DCI from SA/PD/DCI dated
12 August 1958 (DPS-3074)

1. This memorandum is for information only. Its purpose is to identify the special projects referred to in a separate memorandum on the financing of these projects (DPS-3074). The tasks to be performed under these several projects were not described in the referenced memorandum on financing because of their extreme sensitivity and because the recommendations on financing, if approved by you, should be in such a form that it could be circulated to a number of unwitting individuals within and outside of the Agency. The five projects therein referred to are identified in the following paragraphs.

2. CHALICE. This is Project AQUATONE renamed. The activities comprised in this project include:

Personnel and support of the two CHALICE Detachments overseas, the ZI base at Edwards Air Force Base, and almost all of the Development Projects Staff;

The operation and maintenance of the U-2 aircraft remaining in possession of the Agency (currently thirteen in number);

Any remaining development work on U-2 aircraft and other subsystems employed in CHALICE (notably a new ECM device and considerable production flight testing of items to be delivered to the Strategic Air Command);

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Costs of [REDACTED] participation, such as personal equipment for [REDACTED] pilots and possibly some modifications to an additional overseas base.

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3. [REDACTED] This was the name given to the extensive studies we have conducted over the past two years in an effort to develop an effective radar camouflage for the U-2 aircraft and other conventional aircraft. As explained in the memorandum on financing, most of the costs of [REDACTED] have been incurred in preceding fiscal years when this was carried on as a subproject under AQUATONE and financed out of AQUATONE funds. These costs included:

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Sizable contracts with [REDACTED]

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[REDACTED] for the production of camouflage;

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Costs in excess of [REDACTED] incurred under contracts with [REDACTED] for the application and removal of camouflage and for the measurement of radar reflectivity;

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The construction and installation of highly sophisticated test facilities at [REDACTED] Air Force Base and their operation by the firm of [REDACTED] under contract with us.

Since we have now abandoned efforts to develop an effective camouflage, the only costs remaining to be incurred under this project in FY-1959 are those of removing the [REDACTED] covering from the two aircraft on which it remains. We also expect to incur modest additional costs to permit the [REDACTED] to write up in useful form the results of two years of highly significant work.

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4. [REDACTED] This project, which is nearly a year old, consists of feasibility studies looking toward a successor aircraft to the U-2. The major expenses that have been incurred have been the costs of work performed by the [REDACTED] and the Lockheed Aircraft Corporation. Lockheed has conducted an extensive program involving at least preliminary design of no less than 30 to 40 configurations of aircraft. It has also carried out an extensive program of model building and of measuring radar reflectivity of models. Lockheed also built a partial full-scale mock-up of a possible [REDACTED] aircraft. [REDACTED] and [REDACTED] costs have been for model testing and for extensive radar measurements on the above-mentioned mock-up. Additionally, some funds have been spent (under subcontract to Lockheed) for studies by [REDACTED] incorporated of the feasibility of certain types of plastic structures. Lastly,

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[REDACTED] was obligated under this project to match an equal sum obligated by the Air Force for the construction of a pilot plant to produce beryllium oxide fibers for possible use in high strength plastic structures. Virtually all of the above costs are continuing in the current fiscal year.

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5. [REDACTED] Under this project a feasibility study (parallel to GUSTO) is being made of a possible extremely radical, high-performance reconnaissance aircraft which might achieve an operating altitude in excess of [REDACTED]. This study is based on a design concept that originated with the Bureau of Aeronautics of the Navy. The study was initiated only after this design concept had been reviewed by the then National Advisory Committee for Aeronautics which strongly recommended that the study be made. This project is being carried out in cooperation with and with the technical assistance of the Bureau of Aeronautics. Study contracts have been let with Convair, Boeing, Hughes, Marquardt, and Goodyear. [REDACTED] Dollars was obligated for [REDACTED] in 1958, of which [REDACTED] Dollars was released by the Director of Central Intelligence from his special reserve and the balance was supplied from AQUATONE funds. The project has been closely followed in recent months and has been reviewed by the special panel under the chairmanship of Dr. Edwin Land. It is believed to be highly promising. Substantial additional costs are required and are believed to be justified in the current fiscal year to permit the feasibility studies to be continued. It should be possible within approximately two months' time to complete most of the studies now in progress or proposed. At that time, a decision will have to be made as to whether to proceed to a preliminary design study and to experimental work with gliders. These activities would involve substantially larger funds than presently proposed in the operating budget for FY-1959.

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6. CORONA. This name covers all aspects of the program for the launching of 12 reconnaissance satellites which will take photography during their overflights of the Soviet Bloc and will contain provisions for storage of the exposed film in a capsule which will re-enter, drop in a preselected ocean impact area, and be recovered. This project was approved at the highest level and [REDACTED], released from the Agency Reserve, was obligated in FY-1958, almost all for prime contract to Lockheed's Ballistic Missile Division. Although the total of [REDACTED] contained some reserve over the then available estimate of the Agency's share of the costs of the program, it now appears that there will be some overrun. Moreover, ARPA is in grave trouble with its biomedical program and there

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is a real possibility that the Agency will have to pick up certain costs which were originally planned to be charged to the biomedical program. Finally, the Agency will probably incur some operational costs, for which no firm estimate is yet available.

7. GENERAL COMMENT. The above outline may help to make clear both the reason that such large costs for the above projects have materialized in the last few months, well after the budget for FY-1959 was presented to Congress, and the difficulty of estimating even at this date just what the cost of these projects will be. It is understood that activities of the sort herein described are in no sense exempt from the requirement for economical administration and the need to restrict our outlays within reasonable and approved limits. Nevertheless, if CHALICE is to be continued through the full fiscal year and if CORONA is to be carried through, there is little room for maneuver in the reduction of their costs. With respect to feasibility studies, the philosophy of this office has been that the objective in view is so important, and the cost of exploring technical possibilities is so small a part of the cost of a whole new reconnaissance vehicle, that any and all promising technical opportunities should be explored with urgency.

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for Planning and Development

RMB:ggs (8/13/58)

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